What is Claimed is:

1. A lens system for use in a projection system for relaying light output from a first imager on a pixel-by pixel basis onto a second imager, the lens system comprising a double gauss lens set having a distortion of less than about 0.015% with at least about 90% of the light energy of a specific pixel projected within a 15.4 micrometer square.

2. The lens system of claim 1 wherein said double gauss lens set has a magnification of between about -0.9997 and -1.0003.

3. The lens system of claim 1 wherein said double gauss lens set has a telecentricity with an input and output angle deviation of less than 1.05 degrees.

4. The lens system of claim 3 wherein said double gauss lens set has a telecentricity with an input angle deviation of less than 1.03 degrees and an output angle deviation of less than 1.0 degrees.

5. The lens system of claim 3 wherein said double gauss lens set consists of a pair of symmetrical aspherical lenses surrounding a pair of symmetrical acromatic lenses.

6. The lens system of claim 5 wherein said acromatic lenses comprise optical glass.

7. The lens system of claim 1 wherein the total distance between the first and second imagers is less than 165 mm.

8. The lens system of claim 1 wherein the total distance between the first and second imagers is about 161.25 mm.

9. The lens system of claim 1 wherein the double gauss lens set has an F-number no greater than about 2.8.

10. An imager to imager relay lens system for use in a projection system, comprising a lens set consisting of one pair of equivalent acromatic lenses and one pair of

equivalent aspherical lenses positioned and configured to project the light output from a particular pixel on a first imager onto a corresponding pixel on a second imager.

11. The imager to imager relay lens system of claim 10 wherein the total distortion of said relay lens system is less than about 0.015% with at least about 90% of the light energy of a specific pixel projected within a 15.4 micrometer square, said relay lens system further having a magnification of between about -0.9997 and -1.0003.

12. The imager to imager relay lens system of claim 10 wherein said lens set has a telecentricity with an input and output angle deviation of less than 1.05 degrees.

13. The imager to imager relay lens system of claim 12 wherein said lens set has a telecentricity with an input angle deviation of less than 1.03 degrees and an output angle deviation of less than 1.0 degrees.

14. The imager to imager relay lens system of claim 10 wherein the total distance between the first and second imagers is less than 165 mm.

15. The imager to imager relay lens system of claim 10 wherein the total distance between the first and second imagers is about 161.25 mm.

16. The imager to imager relay lens system of claim 10 wherein the lens set has an F-number no greater than about 2.8.